

REMARKS

This Application has been carefully reviewed in light of the Office Action mailed September 20, 2005. Applicants appreciate the Examiner's consideration of the Application. Claims 1, 3-5, 13, 15-17, 20, 22-24, 30-33, and 36 have been amended to clarify, more particularly point out, and more distinctly claim inventive concepts previously present in these claims. Certain amendments do not narrow the scope of the claims, and certain amendments are not required for patentability. In order to advance prosecution of this Application, Applicants have responded to each notation by the Examiner. Applicants respectfully request reconsideration and favorable action in this case.

Section 103(a) Rejection

The Examiner rejects Claims 1-36 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,887,032 to Cioffi ("*Cioffi*") in light of U.S. Patent No. 6,807,236 to Fujimura ("*Fujimura*"). Applicants respectfully traverse this rejection for the reasons discussed below.

Applicants respectfully submit that the combination of *Cioffi* and *Fujimura* proposed by the Examiner fails to disclose, teach, or suggest elements specifically recited in Applicants' claims. For example, the *Cioffi-Fujimura* combination proposed by the Examiner fails to disclose, teach, or suggest "detecting crosstalk on a first line communicating a first signal in a first direction, the crosstalk generated by communication of a second signal occurring on a second line, the second signal communicated in a second direction opposite the first direction," recited in amended Claim 1.

1. *Fujimura* fails to disclose, teach, or suggest the elements of Claim 1.

Applicants respectfully submit that *Fujimura* fails to disclose, teach, or suggest the elements. *Fujimura* discloses elimination of crosstalk between signals traveling from a sending system to a receiving system:

Referring to FIG. 3, it is assumed that the clock signal 4 goes low and the clock signal 6 goes high at time instant t0. In this case, if no crosstalk elimination were made, then, at the receiving system 2, the data signal 7 would be read at the trailing edge timing t2 of the clock signal 8. However, the trailing edge timing t2 of the clock signal 8 is also the leading edge timing of the clock signal 10 corresponding to the clock signal 6. Therefore, the data signal 9 would interfere with the data signal 7 at the timing t2.

(*Fujimura*, column 4, lines 57-65.) The data signal 9 and the data signal 7 travel in the same direction from the sending system 1 to the receiving system 2. (See, *Fujimura*, Figure 1.) That is, the crosstalk is generated by ***signals traveling in the same direction***. Accordingly, *Fujimura* fails to disclose, teach, or suggest, “detecting crosstalk on a first line communicating a first signal in a first direction, the crosstalk generated by communication of a second signal occurring on a second line, the second signal communicated in a second direction opposite the first direction,” recited in Claim 1.

2. *Cioffi* cannot be properly combined with *Fujimura* to disclose, teach, or suggest the elements of Claim 1.

Applicants respectfully submit that *Cioffi* cannot be properly combined with *Fujimura* because there is no reasonable expectation of success. The prior art can be modified or combined to reject claims as *prima facie* obvious as long as there is a reasonable expectation of success. MPEP §2143.02 (citing *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986)).

Cioffi discloses a near-end crosstalk (NEXT) canceller inserted between one line transmitting signals downstream and another line receiving signals from downstream. According to *Cioffi*:

The NEXT interference 504 shown in FIG. 5A is eliminated or mitigated by a NEXT canceller 506 inserted between the lines. ... The crosstalk canceller 506 estimates the crosstalk induced from the transmitting line 500 to the receiving line 502.

Then an adder/subtractor 508 subtracts the estimated crosstalk from the received signals, thereby eliminating or mitigating the NEXT interference.

(*Cioffi*, column 11, lines 12-23.) *Cioffi* also discloses:

In any case, the conceptual diagram of FIG. 5A has one line 500 currently transmitting signals downstream and another line 502 receiving signals from downstream.

(*Cioffi*, column 10, lines 63-66.) That is, the NEXT canceller 506 of *Cioffi* is inserted between one line 500 transmitting signals downstream and another line 502 receiving signals from downstream.

Fujimura discloses a phase comparator of a sending system that compares clock signals to yield trigger signals indicating possible crosstalk timings to send to a receiving system. (*Fujimura*, column 3, lines 17-36.) According to *Fujimura*:

The phase comparator 103 compares the clock signals 4 and 6 to produce monostable trigger signals 13 and 14 each indicating possible crosstalk timings, at which crosstalk may be generated at the receiving system 2. More specifically, the trigger signal 13 indicates the timing of possible crosstalk from the data signal 9 to the data signal 7 and the trigger signal 14 indicates the timing of possible crosstalk from the data signal 7 to the data signal 9.

(*Fujimura*, column 3, lines 29-36.) That is, the phase comparator 103 compares the clock signals 4 and 6 to yield trigger signals 13 and 14 indicating possible crosstalk timings to send to the receiving system 2.

Applicants respectfully submit that there is no reasonable expectation of success that the phase comparator 103 of *Fujimura* can compare upstream and downstream signals of *Cioffi* to yield trigger signals 13 and 14 that can be used in *Cioffi* to reduce crosstalk. Accordingly, *Cioffi* cannot be properly combined with *Fujimura* to disclose, teach, or suggest the elements of Claim 1.

For at least these reasons, *Fujimura* fails to disclose, teach, or suggest the elements specifically recited in Claim 1, whether *Fujimura* is considered alone or in combination with *Cioffi*. Accordingly, Claim 1 is allowable over the *Cioffi-Fujimura* combination proposed by the Examiner.

Applicants' dependent claims are allowable based on their dependence on the independent claims and further because they recite numerous additional patentable distinctions over the references of the rejection. For example, the *Cioffi-Fujimura* combination proposed by the Examiner fails to disclose, teach, or suggest "determining a phase of the crosstalk detected on the first line comprises, ... the pulse sequence comprising a plurality of first pulses communicated in the first direction and a plurality of second pulses communicated in the second direction," recited in amended Claim 3. The Examiner concedes that *Cioffi* fails to disclose, teach, or suggest determining a phase of the crosstalk detected on the first line. (Office Action, page 2.) Moreover, the phase comparator 103 of *Fujimura* compares clock signals 4 and 6 communicated in the same direction. (See, e.g., *Fujimura*, column 3, lines 29-36.) Accordingly, the *Cioffi-Fujimura* combination proposed

by the Examiner fails to disclose, teach, or suggest all of the elements specifically recited in Claim 3. Claims 15, 22, and 31 are allowable for similar reasons.

Because Applicants believe they have amply demonstrated the allowability of the independent claims over the references of the rejection, and to avoid burdening the record, Applicants have not provided additional detailed remarks concerning these dependent claims. Applicants, however, remain ready to provide such remarks if it becomes appropriate to do so.

Independent Claims 13, 20, 30, and 36 recite certain limitations substantially similar to those recited in independent Claim 1. Accordingly, for at least similar reasons, independent Claims 13, 20, 30 and 36, together with their dependent claims, are allowable over the *Cioffi-Fujimura* combination proposed by the Examiner.

For at least the above reasons, Applicants respectfully request reconsideration and allowance of independent Claims 1, 13, 20, 30, and 36 and all claims that depend on these claims.

CONCLUSION

Applicants have made an earnest attempt to place this case in condition for allowance. For at least the foregoing reasons, Applicants respectfully request full allowance of all the pending claims.

If the Examiner believes a telephone conference would advance prosecution of this case in any way, the Examiner is invited to contact Keiko Ichiye, the Attorney for Applicants, at the Examiner's convenience at (214) 953-6494.

Although Applicants believe no fees are due, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

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